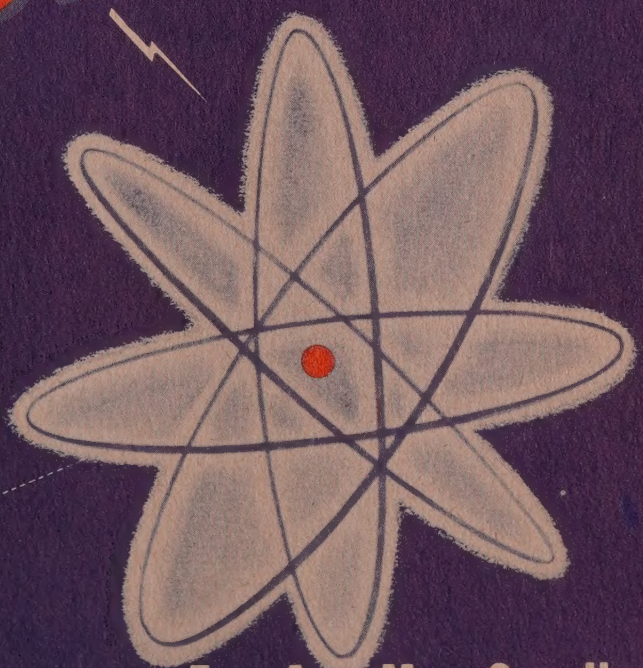
OPERATING INSTRUCTIONS

VACUUM TUBE TESTER
MODEL 536

HICKOK



WORLD FAMOUS

THE HICKOK ELECTRICAL INSTRUMENT COMPANY
10514 DUPONT AVENUE • CLEVELAND 8, OHIO
The Standard of Quality for Over 40 Years

OPERATING INSTRUCTIONS

FOR

MODEL 536

TRANSCONDUCTANCE TUBE TESTER

THE HICKOK ELECTRICAL INSTRUMENT COMPANY

10514 Dupont Ave.

Cleveland 8, Ohio

IMPORTANT

SEE INSTRUCTIONS FOR TESTING FILAMENT CONTINUITY ON PAGE 4.

NOTE: The Data Chart supplied with this tube tester lists MINIMUM (NOT AVERAGE) values of Mutual Conductance for all tubes.

Tubes reading lower than the value printed on the chart should be discarded.

GUARANTEE

THE HICKOK ELECTRICAL INSTRUMENT COMPANY WARRANTS INSTRUMENTS MANUFACTURED BY IT TO BE FREE FROM DEFECTIVE MATERIAL OR FACTORY WORKMANSHIP AND AGREES TO REPAIR SUCH INSTRUMENTS WHICH UNDER NORMAL USE AND SERVICE, DISCLOSES THE DEFECT TO BE THE FAULT OF OUR MANUFACTURING. OUR OBLIGATION UNDER THIS WARRANTY IS LIMITED TO REPAIRING ANY INSTRUMENT OR TEST EQUIPMENT WHICH I ROVES TO BE DEFECTIVE WHEN RETURNED TO US, TRANSPORTATION PREPAID, WITHIN NINETY (90) DAYS FROM THE DATE OF ORIGINAL PURCHASE AND PROVIDED THE SERIAL NUMBER HAS BEEN MADE KNOWN TO US PROMPTLY FOR OUR RECORDS.

THIS WARRANTY DOES NOT APPLY TO ANY OF OUR PRODUCTS WHICH HAVE BEEN REPAIRED OR ALTERED BY UNAUTHORIZED PERSONS OR SERVICE STATIONS IN ANY WAY SO AS, IN OUR JUDGMENT, TO INJURE THEIR STABILITY OR RELIABILITY OR WHICH HAVE BEEN SUBJECT TO MISUSE, NEGLIGENCE, OR ACCIDENT, OR WHICH HAVE HAD THE SERIAL NUMBER ALTERED, EFFACED OR REMOVED. NEITHER DOES THIS WARRANTY APPLY TO ANY OF OUR PRODUCTS WHICH HAVE BEEN CONNECTED, INSTALLED OR ADJUSTED OTHERWISE THAN IN ACCORDANCE WITH THE INSTRUCTIONS FURNISHED BY US. ACCESSORIES INCLUDING ALL VACUUM TUBES NOT OF OUR MANUFACTURE USED WITH THIS PRODUCT ARE NOT COVERED BY THIS WARRANTY.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED AND NO REPRESENTATIVES OR PERSON IS AUTHORIZED TO ASSUME FOR US ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF OUR PRODUCTS.

PARTS WILL BE MADE AVAILABLE FOR A MINIMUM PERIOD OF FIVE (5) YEARS AFTER THE MANUFACTURE OF THIS EQUIPMENT HAS BEEN DISCONTINUED. PARTS INCLUDE ALL MATERIALS, CHARTS, INSTRUCTIONS, DIAGRAMS, ACCESSORIES, ETC., WHICH HAVE BEEN FURNISHED IN THE STANDARD MODEL.

RETURNING EQUIPMENT FOR REPAIRS

Before returning any equipment for service, under warranty or otherwise, the factory must first be contacted giving the nature of the trouble. Instructions will then be given for either correcting the trouble or returning the equipment. Upon authorization, this equipment should be forwarded directly to the Hickok factory located at 10636 Leuer Avenue, Cleveland 8, Ohio, or to a designated service station in your locality. All correspondence pertaining to repairs should be directed to Hickok Electrical Instrument Company, 10514 Dupont Avenue, Cleveland 8, Ohio, or to the authorized service station designated.

REGISTRATION CARD

The above guarantee is contingent upon the attached registration card being returned to the factory immediately upon receipt of the equipment.

THE INSTRUMENT PACKED HEREWITH IS:

	PACKER'S CHECK
1 MODEL 536 VACUUM TUBE TESTER	
ACCESSORIES INCLUDED WITH THE TESTER ARE:	
1 - BOOKLET INSTRUCTIONS	
1 - GRID LEAD WITH CLIP	

SERIAL NO. _____

SIGNED: _____

INSTRUCTIONS FOR OPERATION OF MODEL 536

Read these instructions through before attempting to operate the tester.

1. There are two rectifier tubes, an 83 and a 5Y3GT necessary to operate this tester. They are included.

The Short Lamp is a 1/4 watt, 110 volt, candelabra base neon signal lamp made by The General Electric Company. This lamp will last indefinitely unless broken.

The Fuse Lamp is a standard No.81, single contact auto bulb. This can be procured from any auto dealer or gasoline station attendant. This fuse lamp is in the primary circuit of the transformer.

2. Use on 60 cycles 110-125 volt circuit.

FUNCTIONS OF THE VARIOUS CONTROLS:

3. The line adjustment control rheostat in the 536 tester is connected with a small A.C. voltmeter as a constant calibration indicator which is normally always in circuit. The small A.C. voltmeter may also be used to register 60 cycles A.C. line voltage fed to the set by operating the test button P7 designated "LINE TEST" in the lower right part of the control panel.

4. SELECTORS--The row of selector dials across the center of the control panel is for the purpose of conducting proper voltages to the tube's base pins. The operation of setting these dials is similar to DIALING A TELEPHONE NUMBER. On the roll data chart, below the word SELECTORS, appear the dialing numbers. These dialing numbers consist of two letters and five figures. Example: JR-6237-5. Starting at the left, the first dial is turned until the letter "J" appears through the window. The second dial is turned until "R" appears. The third dial indicates 6; the fourth, 2; the fifth, 3; the sixth, 7 and the seventh, 5.

The lettered dials control the filament or heater connections. The numbered dials control the GRID, PLATE, SCREEN, CATHODE and SUPPRESSOR in that order. In the example given above the heater terminals are connected to pins 8 and 1. The GRID is connected to pin 6; PLATE, to pin 2; SCREEN, to pin 3; CATHODE, to pin 7 and SUPPRESSOR, to pin 5.

These dial switches are electrically interlocked in such a way that it is impossible to connect two different voltage elements to the same pin. Thus accidental shorts are avoided.

The dialing system is designed so that a minimum of dial setting is required. For example, the heater setting is practically always JR so that these two dials seldom need resetting. It will also be noticed that when testing duodiode triode tubes the amount of dialing has been reduced to a minimum.

5. SHORT TEST--Turning the SHORTS switch successively through the positions 1-2-3-4-5 connects the various pairs of elements in turn across the test voltage. Tubes having shorted elements will complete the circuit and cause the neon SHORT lamp to glow. Tubes may be tested for shorts, either hot or cold.

A short is indicated by a steady glow of the neon lamp in certain positions of the SHORTS switch. A momentary flash of the lamp as the switch is turned

from one position to another should be disregarded. This flashing is caused by the charging of a capacitor in the test circuit. A shorted tube should be discarded without further test.

6. LOCATING SHORTED ELEMENTS--In the following table (X) under any SHORT switch position indicates that the neon lamp glows in that position.

KIND OF SHORT	1	2	3	4	5
FIL -- CATHODE			X		
FIL -- GRID	X	X			X
FIL -- PLATE	X	X		X	X
FIL -- SCREEN	X		X	X	X
FIL -- SUP		X			
GRID -- CATHODE	X	X	X		X
GRID -- PLATE				X	
GRID -- SCREEN		X	X	X	
GRID -- SUP	X				X
PLATE -- SCREEN		X	X		
PLATE -- SUP	X			X	X
SCREEN -- SUP	X	X	X	X	X

7. NOISE TEST --The short test circuit is also used in making noise tests on vacuum tubes. Connections are made from the noise test jacks to the antenna and ground posts of any radio receiver. The tube under test is tapped with the finger as the SHORTS switch is turned through positions 1-2-3-4-5.

Intermittent disturbances which are too brief to register on the neon lamp will be reproduced by the loud speaker as static.

8. GAS TEST --DOES NOT APPLY TO RECTIFIER TUBES. The push switch P5 (Gas 1) and P6 (Gas 2) are used to test an amplifier tube for gas content.

a. The MICROMHO switch is set on 3000.

b. The push switch P5 is pressed and held down while the BIAS dial is turned to cause the pointer of the indicating meter to read 100 micromhos.

c. P5 is held down and P6 is pressed.

d. If the tube contains gas the meter pointer will move up the scale. If the pointer movement is not more than one small division of the scale the gas content is satisfactory.

NOTE

With some tubes, such as the type 45, the micromho reading cannot be brought down to 100 by turning the BIAS dial. In such case turn the BIAS dial to 100 and test for gas.

Some tubes develop gas after being heated for a period of time. If a tube is suspected, allow it to heat for a few minutes.

9. DYNAMIC TRANSCONDUCTANCE -- The Push Switch P4 is pressed to indicate transconductance (or mutual conductance).

The indicating meter will register the tube's value in six ranges. English; 3000, 6000, 15000 Micromhos with HIGH Signal; 6000, 15000 Micromhos with LOW Signal.

The Micromho switch automatically changes the signal from HIGH, 5 volts to LOW, 1 volt when the appropriate setting is made.

The range, ENGLISH, on the MICROMHO switch is used when it is desired to test the tube in terms of GOOD-REPLACE. In this case the ENGLISH dial must be set in accordance with the figures given on the data chart under the heading, ENG. When using the ENGLISH range good tubes will cause the meter pointer to read in the GOOD sector. Worn out tubes will read in the REPLACE sector. Those tubes which read in the sector marked (?) have some useful life but should be replaced soon. The ENGLISH reading scale is also based on Transconductance. It is not an emission test.

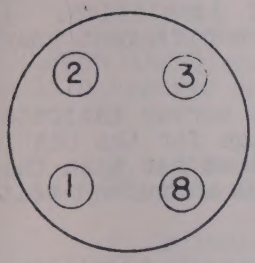
The micromho values printed on the data roll are average values. A small variation above or below these average values is to be expected even with new tubes.

The ENGLISH scale is designed to make tubes read at the left edge of the GREEN (GOOD) sector when 20% below average for amplifier tubes and 35% below average for power tubes.

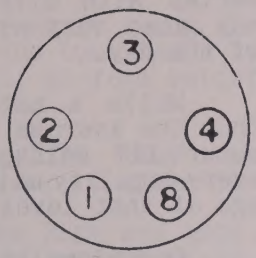
10. RECTIFIER TEST -- The push switches P1, P2 and P3 are used to test various types of rectifier elements.

a. The push switch P1 is used when testing detector diodes. It applies a low voltage which will not injure the delicate cathode. Good diodes will cause

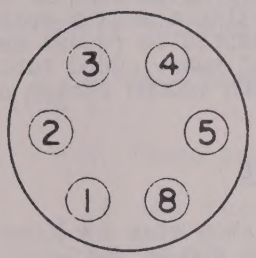
SOCKET NUMBERING
BOTTOM VIEWS



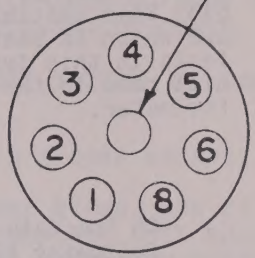
4 PIN



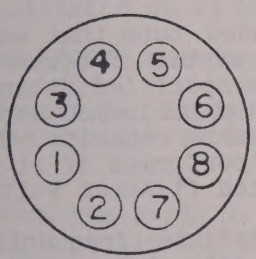
5 PIN



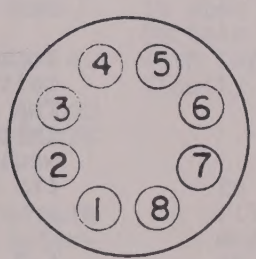
6 PIN



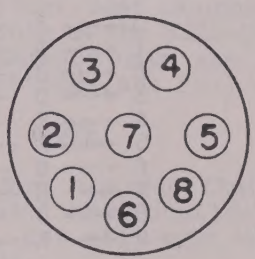
7 PIN
STANDARD



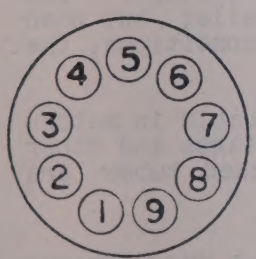
OCTAL



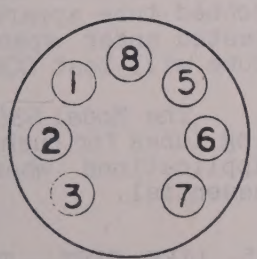
LOKTAL



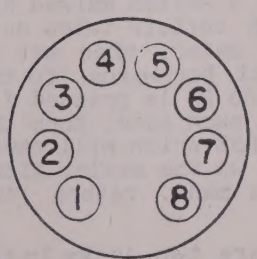
ACORN



NOVAL



7 PIN
MINIATURE



CIRCULAR
SUB MINIATURE

IN LINE
SUB MINIATURE

the meter pointer to read above the mark, DIODES OK.

b. Push switch P2 is used when testing cold cathode rectifiers such as the OZ4. This applies a voltage sufficiently high to ionize the tube and start conduction. Good tubes will read in the GREEN (GOOD) sector of the meter.

c. Push switch P3 is used when testing ordinary rectifier tubes such as the 5Y3. This switch applies a medium voltage which is best adapted to reveal defects in this type of tube. Good tubes will read in the GREEN (GOOD) sector of the meter.

NOTE

On the data chart a star (*) following P1, P2 and P3 indicates that the MICROMHO switch is to be set on ENGLISH.

11. SOCKET NUMBERING--In order to reduce dialing to a minimum, the sockets in the Model 536 Tube Tester are numbered as shown above. The numerical values of the lettered dials are as follows:

0	A	P
1	B	R
2	C	S
3	D	T
4	E	U
5	F	V
6	G	W
7	H	X
8	J	Y
9	K	Z

The letter "I" was omitted because of its resemblance to the figure "1". the letter "Q" was omitted because of its resemblance to the figure "0".

12. METER REVERSE -- Directly below the indicating meter is a switch marked REVERSE-NORMAL. With certain tubes such as the 117N7, the meter, when set on NORMAL, will deflect backwards (to the left) when push switch P3 is pressed for rectifier test. In such case, turn the meter switch to REVERSE which will cause the pointer to move up the scale. After this test has been made, return the switch to NORMAL.

13. TOP CAPS--There are two jacks in the upper center of the control panel marked GRID and PLATE. These are used when making connection to the top cap of the tube being tested. On the data chart in the NOTATIONS column opposite tube types having top caps, is the notation CAP=G or CAP=P. G means that the top cap is connected to the GRID and P, to the PLATE jack.

NOTE

The center of the large 7-pin socket is used to check pilot lamps. Set the filament selector switches on JR. Set the filament voltage switch to the proper voltage for the lamp being tested.

14. SPECIAL NOTES --Power line voltage varies with different localities. It may also vary with the different hours of the day.

While a national survey indicates that the average voltage for the USA is about 117 volts, it does not mean that every locality maintains a constant voltage at that level.

Occasionally we have had the complaint that a used tube will test GOOD, but will not work in the radio receiver; but when a NEW tube is substituted, the receiver will operate correctly. The answer is this: Tubes are built to specifications. Our tube testers are designed to test tubes in conformity with these specifications.

The used tube that would not perform in a certain receiver was not receiving its specified filament voltage. The new tube performed because of its initial reserve capacity. The used tube would have performed if it had received its specified filament voltage.

Tube failure frequently occurs in A.C.--D.C. sets where several tubes are connected with their heaters or filaments in series. Sometimes, even though the power line voltage is normal, a series tube with abnormally high filament resistance will rob its companion tube of its normal filament voltage. The robbed tube apparently fails; but when tested under specified conditions, the tube will test GOOD.

The Model 536 is valuable in matching tubes for push-pull stages and other applications where matched tubes are essential.

15. LIFE TEST -- The model 536 MICROMHO DYNAMIC MUTUAL CONDUCTANCE TUBE TESTER is equipped with a special feature to enable Life Test to be made on the tube. In the Lower Right of the control panel is a switch designated NORMAL and LIFE TEST.

a. Measure the mutual conductance in the ordinary way with switch on NORMAL.

b. Set the MICROMHO range switch on ENGLISH.

c. Press P4 and adjust the ENGLISH dial until the tube reads in the GREEN (GOOD) sector at 2000 on the scale.

d. While holding everything else constant,throw switch to LIFE TEST. This reduces cathode temperature.

e. If the meter still reads in the GREEN (GOOD))sector,the tube has a large life reserve and will perform satisfactorily.

f. After making LIFE TEST return the switch to NORMAL for all other tests.

g. In testing the 35Z5 and 45Z5 rectifier tubes it is advisable to turn the power off for about 15 seconds after throwing the LIFE TEST switch to LIFE TEST to allow the cathode to cool. Then turn the power on and note new reading of the meter.

16. CONTINUITY TEST--The Model 536 Tube Tester can be used to test for continuity through resistance up to 200,000 ohms.

a. Set SHORTS switch on position 4.

b. Connect two leads having prods and pin tips to the jacks marked PLATE and GRID.

c. Touch the prods to the terminals through which continuity is to be determined.

d. The neon lamp will glow if circuit is continuous.

17. FILAMENT AND HEATER CONTINUITY

1. Turn Tester on.

2. Set selectors as per chart for tube to be tested.

3. Set FILAMENT switch on BLST instead of voltage indicated on chart.

4. Set SHORT TEST switch on position 1.

5. Place tube in proper socket.

If the neon lamp glows, the filament is good and a complete test should then be made on the tube, by setting FILAMENT switch on the proper tap, and while the tube heats, rotate the SHORT TEST SWITCH several times thru all positions. If no shorts are indicated, set the switch in TUBE TEST position and proceed to test the tube as per chart.

If Neon lamp does not glow,filament is open and further test is unnecessary. Certain tubes such as the 35Z5-50Z7,etc., with tapped filaments have special continuity test settings;see roll chart.

NOTE

It sometimes happens that a filament will show continuity when cold, but will open when it warms up.

TO TEST BALLAST TUBES

1. Turn Tester on.
2. Set filament switch to BLST.
3. Set SHORT TEST switch on 1.
4. Set first selector switch (lettered A to K) to letter shown in column marked (first selector) -- Set all numbered selectors on zero --
5. ROTATE second selector switch (lettered P to Z) from P to Z. NEON LAMP SHOULD LIGHT IN POSITIONS NOTED.

TUBE TYPE	First Selector	Neon lamp should light in these positions.						
1A1-1B1-1C1-1E1-1F1-1G1-1J1-1K1-1L1-1N1-1P1-1Q1-1R1G-1S1G-1T1G-1U1G-1V1-1Y1-1Z1-2	J	R						
2UR224	J			T				X
2LR212	H	R	S		U			
3	J	R						
03G	J			T				
4-5	J	R						
6-133	J			T				
6-6AA	J	R						
7-8-9	J	R						
10A-10AG	J			T				
10AB	J			T				X
K17B-M17C-BM17C	J			T				X
M17HC-M17H	J		S					X
	D	R						
K23B-K23C-KX23B-KX30C	J			T				X
M30H	J		S					X
	D	R						
30A-K30A	J			T				
K30D	J	R		T				X
33A-33AG	J			T				
K34B	J			T				X

TUBE TYPE	First Selector	Neon lamp should light in these positions.						
36A	J			T				
K36B-BK36B-L36B-BM-L36C-KX36C	J			T				X
KX36A	J	R						
36D-L36D	J	R		T				X
L36DJ	J	R		T	U			X
K36H-M36H-M36HG	J		S					X
	D	R						
L40S1-L40S2	J	R		T		V		
42A	J			T				
42A1	H				U			
42A2-42B2	H		S		U			
K42B-L42B-M42B-KX42B-LX42B-L42BX-K42C-L42C-M42C	J			T				X
KB42D-K42D-L42D	J	R		T				X
LX42D-L42DX	J	R	S	T				
K42E-L42E	J			T				X
L42F	J							X
	D	R						
42HA-K42HJ-M42H-M42HG	J		S					X
	E	R		T				
KX42C	J			T				X
L42S1	J	R		T		V		
49A-49AJ-K49AJ	J			T				
KX49A	J			T				X
49A1	H				U			
49A2-49B2	H		S		U			
K49B-L49B-M49B-BM49B-K49C-M49C-BM49C-BK49C-K49E-L49E	J			T				X
K49D-BK49D-L49D	J			T				X
L49F	J							X
	D	R						
M49H-M49HG	J		S					X
	D	R						
KZ49B-KZ49C	J	R				V		
K49BJ-L49BJ	J			T	U			X
L49S2	J	R		T		V		
49AJ-K49AJ	J			T				
KX49B-LX49B-LX49C	J			T				X
L49DJ	J	R		T	U			X
L49S3	J	R		T		V		
50A2	J	R		T				
50A2MG-50B2	J	R				V		
50X3	J	R						
K52H-M52H	J		S					X
	D	R						

TUBE TYPE	First Selector	Neon lamp should light in these positions.						
K54B	J			T				X
55A-K55A	J			T				
55A1	H				U			
KX55A	J	R						
55B-K55B-M55B-BM55B-L55BG-LX55B	J			T				X
55A2-55B2	H		S		U			
K55C-L55C-KX55C	J			T				X
K55CP	J			T		V		X
K55D-L55D	J	R		T				X
L55E-M55E	J			T				X
L55F-M55F-BL55F	J							X
	D	R						
K55H-M55H-M55HG	J		S					X
	D	R						
L55S1-L55S2	J	R		T		V		X
60R30C	J	R		T				
64.23	J			T				
67A	J			T				
K67B-L67B	J			T				X
L73B-K74B-L74B-CX74C	J			T				X
80A	J			T				
K79B-K80B-M80B-K80C-KX80B-L80B	J			T				X
K80F	J							X
	D	R						
KX87B-LX87B-L90B	J			T				X
K90F-M90F-K92F-M92F	J							X
	D	R						
92A	J			T				
L92B-95K2	J			T				X
L99D	J	R		T				X
100R8	J			T				X
120R	J	R						
120RS-135K1	J			T				X
135K1A	J			T	U			X
140L4-140L8-140R4-140R8	J	R		T				
140R	J	R						
140L44-140R44	J	R	S	T				
165L4-165R4-165R8	J	R		T				
165R	J	R						
165L44-165R44	J	R	S	T				
185L4-185L8-185R4-185R8	J	R		T				
185R	J	R						
185L44-185R44	J	R	S	T				
200R-250R	J	R						
250R8-290L4	J			T				X
300R4-320R4	J			T				X
340	J	R						
808-1	J			T	U			X
E14980-W43357-W4588-3613	J			T				X
3334-3334A	J	R		T				X
8593-8598-8601-8664	J			T				X
3ER248	J	R		T	U			X
3CR241	J	R		T				X

TEST DATA FOR BALLAST TUBES

TUBE TYPE	First Selector	Neon lamp should light in these positions.							
B9M15822	B			T					
	E					V			
	G							X	Y
B9M16067	J	R		T		V	W	X	
B9M16275	B			T	U	V	W	X	Y
B9M16534	J	R		T		V	W	X	
B9M17571	H	R		T					
	J				U	V		X	
B9M18941	B		S	T					
	E					V			
	G							X	Y
17A470303	J	R	S			V			
	D				U				
	G							X	
17A485459	J	R	S				W		
	D				U				
TBR102D	B		S	T	U	V			
	G							X	Y
TBR103D	B		S		U	V			
	G							X	Y
TBR104D	B		S	T	U	V			
	G							X	Y
397021	B		S	T					
397022	E					V	W		
397025	J							X	
397036	C					V			
407100	J	R	S			V			
408100	J	R	S			V			
	D				U				
SW507300	J	R		T		V	W	X	
571606	B		S	T					
	E					V	W		
	J							X	

PARTS LIST FOR MODEL 536 TUBE TESTER

NOTE: There is a minimum billing charge of $1.50 for any one parts order.

HICKOK CODE NO.	DESCRIPTION	REF. SYMBOL OR FUNCTION
2490-167	BOOKLET: Instructions	
2920-7	BUTTON, Push: black	
2920-8	BUTTON, Push: red	
3095-8	CAPACITOR: 470 mmf, 500 V, 10%, mica	C2
3095-41	CAPACITOR: 2700 mmf, 500 V, 10%, mica	C3
3105-24	CAPACITOR: .1 mfd, 400 V, paper	C1
3200-43	CHART, Roll: Tube Data	
4160-66	DIAL, Ass'y: beveled, with knob	ENGLISH
4160-67	DIAL, Ass'y: beveled, with knob	BIAS
10300-1	JACK, Pin Plug: Eby #52, red	
10300-2	JACK, Pin Plug: Eby #52, black	
12270-1	LAMP: neon glow, 1/4 watt, 115 volt	
12270-2	LAMP: Tung-Sol #81 auto, bayonet type	
12270-12	LAMP: #47 G.E., 6-8 V, .15 amp	PILOT
12270-17	LAMP: #49 pilot, .06 mils, 2 volts	
12450-145	LEAD, Ass'y: 48" long	
12450-180	LEAD, Ass'y: Grid cap, Amphenol #63-111	
16925-90	POTENTIOMETER: 150-150 ohms dual, linear, wire wound	R4, R5
16927-43	POTENTIOMETER, Ass'y: 3000 ohms	BIAS, R7
18410-472	RESISTOR: 47 ohms, 1/2 W, 10%, fixed, comp.	R21, R22, R23
18414-102	RESISTOR: 100,000 ohms, 1/2 W, 10%, fixed, comp.	R10
18414-241	RESISTOR: 240,000 ohms, 1/2 W, 5%, fixed, comp.	R8
18415-102	RESISTOR: 1 meg, 1/2 W, 10%, fixed, comp.	R24
18422-122	RESISTOR: 1200 ohms, 1 W, 10%, fixed, comp.	R2
18423-151	RESISTOR: 15,000 ohms, 1 W, 5%, fixed, comp.	R3
18575-12	RESISTOR: 1800 ohms, 10 W, 10%, vitreous enamel	R1
18575-19	RESISTOR: 100 ohms, 10%, vitreous enamel, center-tapped	R12, R13
18575-89	RESISTOR: 8500 ohms, 10 W, 10%, vitreous enamel, wire wound	R6
18670-412	RESISTOR, Spool: medium, 48 ohms	R9
18670-414	RESISTOR, Spool: medium, 66 ohms	R20
18670-418	RESISTOR, Spool: medium, 150 ohms	R14
18670-421	RESISTOR, Spool: medium, 257 ohms	R19
18679-78	RESISTOR, Spool: double, 800-200 ohms	R26, R27
18679-90	RESISTOR, Spool: double, 41-109 ohms	R15-17, R16-18
18679-95	RESISTOR, Spool: double, 615-105 ohms	R29, R28
18750-2	RHEOSTAT: Mod. D, 200 ohms, 25 W, Ohmite #2878-3SC	R25
19350-1	SOCKET: small bayonet, Drake #614L-CH-LT	
19350-2	SOCKET: candelabra, Drake #414-14L-LT	
19350-43	SOCKET: Acorn, 7 contact, Alden #457 V1M	
19350-62	SOCKET: 9-pin, black, Cinch Mfg.	
19350-76	SOCKET: 7-pin miniature, Amphenol #147-170-24	
19350-93	SOCKET: 4-pin, black, Amphenol #78-S4	
19350-94	SOCKET: 5-pin, black, Amphenol #78-S5	
19350-95	SOCKET: 6-pin, Amphenol #78-S6	
19350-96	SOCKET: 7-pin, Amphenol #78-7CD	
19350-97	SOCKET: 8-pin loktal, Amphenol #78-8L	
19350-98	SOCKET: 8-pin octal, Amphenol #78-S8TM	
19350-101	SOCKET: sub-miniature, Cinch #EXP-8694	
19350-112	SOCKET: Ass'y, panel light, Drake #40	
19350-119	SOCKET: sub-miniature, in-line, 7 contact, Cinch #EXP-8736-B1	
19910-54	SWITCH: 7-gang, Oak Mfg.	PUSHBUTTON

PARTS LIST FOR MODEL 536 TUBE TESTER

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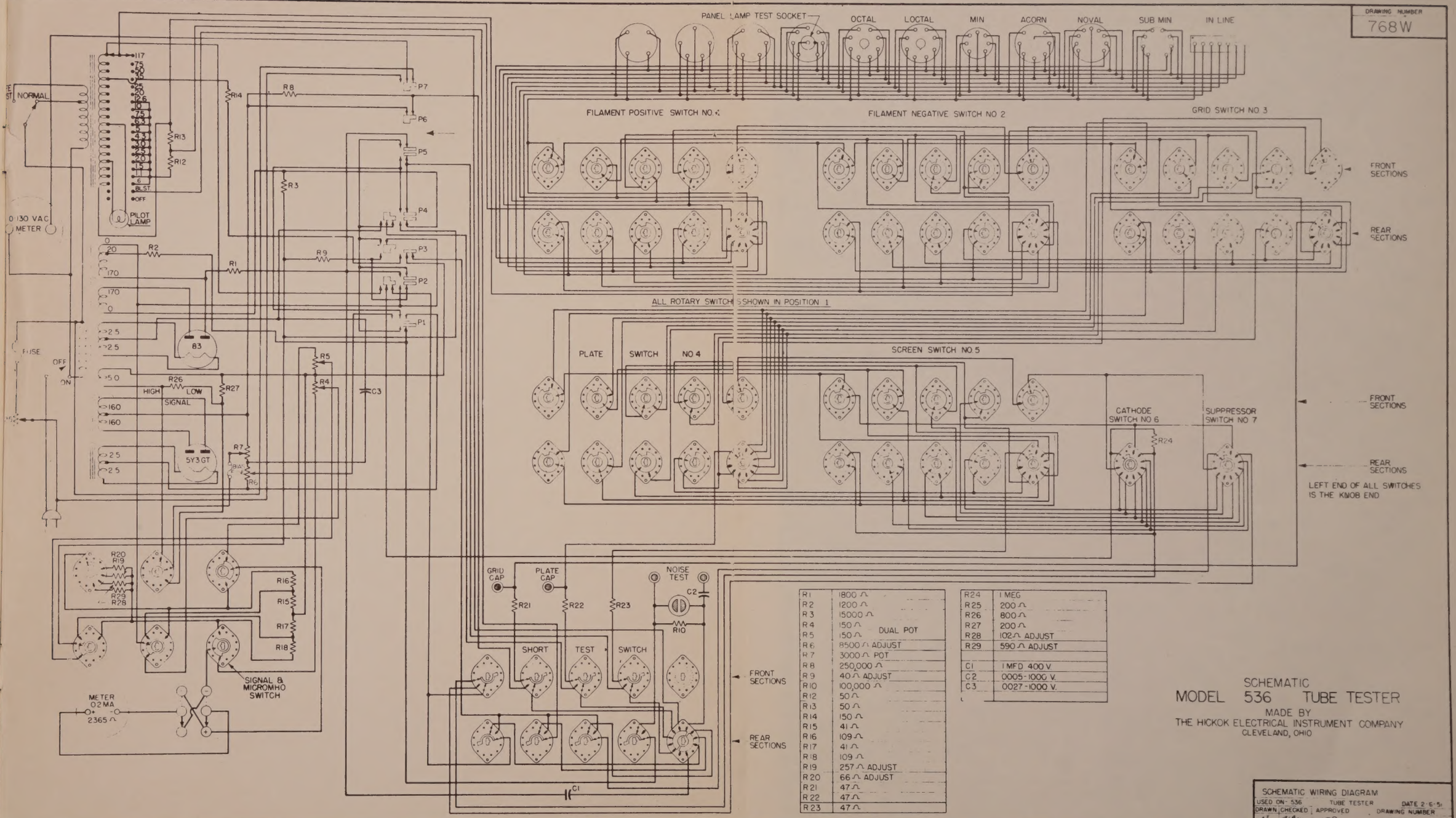
HICKOK CODE NO.	DESCRIPTION	REF. SYMBOL OR FUNCTION
19911-7	SWITCH: snap, D.P.D.T., Oak #16743-78	METER REVERSE
19911-9	SWITCH: toggle, S.P.S.T., with bat handle, A.H. & H. #20994-DA	ON-OFF
19911-19	SWITCH: toggle, S.P.D.T., with bat handle, A.H. & H. #21350	LIFE-TEST
19912-175	SWITCH: rotary, 5 sec, 6 pos, Oak #12782-H5	SHORT TEST
19912-176	SWITCH: rotary, 1 sec, 10 pos, Oak Mfg.	CATHODE-SUPPRESSOR
19912-177	SWITCH: rotary, 5 sec, 10 pos, Oak #31595-H5	SELECTORS
19912-186	SWITCH: rotary, 3 sec, 6 pos, Oak #34971-H3	MICROMHOS
19912-202	SWITCH: rotary, 1 sec, 20 pos.	FILAMENT
20800-69	TRANSFORMER: plate	
20800-103	TRANSFORMER: filament	
20875-6	TUBE: 5Y3GT/G	RECTIFIER
20875-28	TUBE: #83	RECTIFIER

Prices furnished upon request.

NOTE: In ordering parts or materials for this instrument, the serial number must be given in order to identify properly the material required.



SCHEMATIC

MODEL 536 TUBE TESTER

MADE BY
THE HICKOK ELECTRICAL INSTRUMENT COMPANY
CLEVELAND, OHIO

SCHEMATIC WIRING DIAGRAM			
USED ON- 536	TUBE TESTER		DATE 2-6-51
DRAWN	CHECKED	APPROVED	DRAWING NUMBER
JRB		JRB	768W

536-153